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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,086	12/14/2001	Gaston R. Biessener	1009-003US01	9997

28863 7590 12/17/2004
 SHUMAKER & SIEFFERT, P. A.
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EXAMINER

ELMORE, STEPHEN C

ART UNIT	PAPER NUMBER
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2186

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/020,086

Applicant(s)

BIESSNER ET AL.

Examiner

Stephen Elmore

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 is/are allowed.
- 6) ☒ Claim(s) 23-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2186

DETAILED ACTION

1. This Office action responds to the amendment, filed 6-28-2004, amending claims 38, 41, 47 and 52.

2. Claims 1-58 remain for examination.

Drawings

3. The corrected or substitute drawings received on 6/28/2004 are **approved**.

4. The objection to the drawings is **withdrawn**.

Claim Rejections - 35 USC § 112

5. The previous rejections under 35 U.S.C. § 112, second paragraph, are **withdrawn**, however, the following new rejections are **given**.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 23-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are indefinite because:

a. Claims 23-37 and 46-58 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

i. as to Claims 23, 46, 49, and 52, in the language,

a computer-readable medium to store a virtual storage map (VSM)

allocating a primary virtual storage and a secondary virtual storage within a storage system,

and

storing a virtual storage map (VSM) allocate a primary virtual storage and a secondary virtual storage within a storage system,

the "allocating" appears to be performed by the storing of a virtual storage map, however, the "allocating" activity cannot actually be performed by a stored virtual storage map, the map by itself is just a collection of information, but requires the intervention of, for example, a processor executing instructions to interpret the VSM and from that information perform additional steps or activity to accomplish the allocating, therefore, the existing claim elements and structure are insufficient to accomplish the claimed "allocating", and the claim is missing essential additional elements.

and

ii. as to Claim 54, in the language,

storing a virtual storage map (VSM) to define a set of storage units for a primary virtual storage and a secondary virtual storage within a storage system,

the "defining" appears to be performed by the storing of a virtual storage map, however, the "defining" activity cannot actually be performed by a stored virtual storage map, the map by itself is just a collection of information, but requires the intervention of, for example, a processor executing instructions to interpret the VSM and from that information perform additional steps or activity to accomplish the defining, therefore, the existing claim elements and structure are insufficient to accomplish the claimed "to define", and the claim is missing essential additional elements.

Claims 24-37, 47, 48, 50, 51, 53, and 55-58 inherit the deficiencies of the previous claim in the claim dependency chain.

b. Claims 38-45 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are:

as to Claim 38, in the language,

wherein the controller maintains a virtual storage map (VSM) allocating a primary virtual storage and a secondary virtual storage within the storage system,

the "*allocating*" appears to be performed by the controller "*maintaining*" (interpreted as storing) a virtual storage map, however, the "*allocating*" activity cannot actually be performed by storing a virtual storage map, but requires additional structure and activity, for example, the controller interpreting the stored VSM and then accomplish the allocating activity by utilizing the stored VSM information, therefore, the existing claim elements and structure are insufficient to accomplish the claimed "*allocating*", and further, there is a gap between the "*maintaining*" and the "*allocating*", representing missing essential elements;

Claims 39-45 inherit the deficiencies of the previous claim in the claim dependency chain.

c. Claims 46-48 are indefinite because:

Claim 46, the language includes the terminology "*unpublished vendor-specific requests*" which is not terminology in the art, and is not defined in the claim, but further, it is also not clear how "*requests*" that are "*unpublished*" can be selectively filtered, since they are undisclosed they are unknown, and it is illogical that unknown requests are capable of being selectively filtered, therefore, the scope of meaning of this language and the language in context of the entire claim is unclear;

Claims 47 and 48 inherit the deficiencies of the previous claim in the claim dependency chain.

Response to Arguments

8. Applicant's arguments filed 6-28-2004 in response to the previous Office action have been fully considered and are persuasive, however, the claims above have been newly rejected on the merits.

Allowable Subject Matter

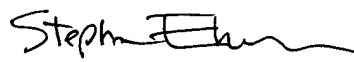
9. Claims 1-22 appear allowable over the prior art of record.
10. Claims 23-58 appear to be allowable over the prior art of record if rewritten or amended to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Elmore whose telephone number is (571) 272-4180. The examiner can normally be reached on Mon-Fri from 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Stephen Elmore
Primary Examiner
Art Unit 2186

December 11, 2004